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LPC 0990809009 LaSalle Co.
U.S. Scrap Barrel Site
ILD 980902209
SF/HRS

CERCLA
Site Inspection Prioritization Report

Illinois Environmental Protection Agency

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SITE INSPECTION PRIORITIZATION REPORT

U.S. Scrap Barrel Site

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1.0 SITE BACKGROUND

1.1 INTRODUCTION

U.S. Scrap Barrel Site was added to CERCLIS (Comprehensive Environmental Response, Compensation, and Liability System) by the Illinois Environmental Protection Agency (IEPA) in February 1984. The site was placed on CERCLIS as a result of a discovery action initiated by the State of Illinois, and subsequently evaluated in the form of a CERCLA Preliminary Assessment (PA) by the IEPA in June of 1984. A CERCLA Screening Site Inspection (SI) was conducted at the site in June of 1986 by Ecology and Environment. In 1987, the IEPA supported nominating the U.S. Scrap Barrel Site to the National Priorities List. However, the site was not placed on the National Priorities List.

In 1994 the IEPA was tasked by the United States Environmental Protection Agency (USEPA) to conduct a Site Inspection Prioritization (SIP) at the U.S. Scrap Barrel Site. The inspection was conducted on May 2 and 3, 1995. During this inspection, personnel from the IEPA collected three soil samples, nine sediment samples, and three groundwater samples.

The purpose of a Site Inspection Prioritization has been developed from USEPA directive and guidance information which outlines Site Assessment program strategies. The purpose of a Site Inspection Prioritization is to "... update the scoring og outstanding site inspections performed prior to the implementation of the revised Hazard Ranking System (HRS). The SIP will quantify the threats posed by these sites and provide sufficient documentation for EPA to decide on the appropriate future course of action. The SIP process allows the Agency to review sites that have had a completed Site Inspection (SI) but lack a final determination regarding the need for further action. The SIP review will indicate whether the SI information meets a minium standard to reflect the revised HRS and scoring strategies mandated by EPA. The results of the SIP will enable EPA to determine if a site is eligible for the National Priorities List. EPA has mandated the establishment of the SIP process in order to address the most hazardous sites first and to standardize the criteria by which sites are evaluated in the Superfund program."

1.2 SITE DESCRIPTION

U.S. Scrap Barrel Site was a drum storage area. It is located in Ottawa, Illinois at the coordinates of 41° 21' 44" North Latitude and 88° 47' 11" East Longitude. The site is located approximately one mile east of the city of Ottawa. The entire site occupies 39 acres consisting primarily of spoil banks and a final cut pond. The area used for drum storage occupied only one acre of the total site and, was located south and adjacent to the spoil bank (refer to Figures 1-1 and 1-2).

The surrounding land uses are currently residential and agricultural with some industrial uses. The U.S. Scrap Barrel Site is bordered by LaSalle County Asphalt Co. to the east. Beyond the asphalt company to the east are Blackwell Valley Private Residences. To the west of the site is Route 71 and a former clay pit area. The site is bordered to the north by O'Neil Creek and residences and, to the south by agricultural fields (refer to Figures 1-1 and 1-2).

The final cut pond adjacent to the drum storage area is approximately 40 feet deep. The top of the bedrock is approximately 50 feet from the surface elevation. The bedrock aquifer is currently by local residents for drinking water. Overflow from the ponds can reach the Fox River via O'Neil Creek which runs along the northern border of the site. Overflow from the ponds is directed to a roadside ditch along Route 71 via a culvert. The ditch travels north and empties into O'Neil Creek. According to the National Wetlands Inventory there are wetlands located along the Fox River. Also, an area along O'Neil Creek contained wetland obligate plants. The site is not fenced and is easily accessible. In fact, the ponds are frequently used for fishing and swimming.

A map delineating the site and showing the area within the 4-mile radius is provided in Appendix A of this report.

1.3 SITE HISTORY

U.S. Scrap Barrel Site was originally mined for clay to be used in brick making. The mining activities ceased operations in the mid 1900s. The property was purchased by the Brown Oil Company in 1970. In 1972, the site was leased to J.B. Industrial. J.B. Industrial had planned to develop the site as a waste disposal facility. In 1973, the hazarduos waste disposal permit submitted by J.B. Industrial was denied by IEPA. It was during the course of permit negotiations that drums were stockpiled on-site. In 1973 up to 20,000 drums were stored on-site.

The drums were stored on the ground in the one acre area. Numerous IEPA inspections indicated open dumping of drums, leaking of drums, drums falling into the pond, numerous spills, and the overall poor condition of the site. Violations included: operating a refuse disposal without a permit, open dumping of liquid hazardous waste, pumping the pond water into a roadside ditch and into O'Neil Creek, and liquid waste observed flowing into the adjacent roadside ditch. Furthermore, several complaints from citizens and the city of odors, fires, and leaks and spills were received. Several IEPA reports also indicated vandalism and flooding covering spilled waste.

According to IEPA files the contents of the drums consisted mainly of pharmaceutical and paint wastes. The wastes were primarily liquids. IEPA also recorded some drum labels indicating the presence of trichlorobenzene, formaldehyde, acetone, trichloroethylene, methanol, and heptane.

Analytical results indicated the presence of tar, toluene, methanol, chloroform, and benzene.

When no permit was issued in 1973, the IEPA ordered the drums to be removed from the site. Later that year, Brown Oil Co. contracted for the deed to the property with U.S. Scrap with the understanding that U.S. Scrap would remove the drums. By 1975 only a portion of the drums had been removed and U.S. Scrap defaulted on the contract for deed agreement. That same year Brown Oil Co. made arrangements with Illinois Valley Disposal Co. to deposit the remaining drums in a special section of their landfill. Drums that had fallen into the ponds were also removed. However, it is possible and has been noted by local residents that some drums still remain in the pond.

Presently, the site is owned by Brown Oil Co. and no drums located on the one-area storage area. Although the drums were removed, no records or accounts of procedures were recorded and no follow up was conducted. Then, in 1984, the site entered in CERCLIS. The PA was completed by IEPA and recommended that an SI be conducted and samples be collected to determine if any contamination exists and if any targets have been affected. In 1985, Ecology and Environment performed an on-site inspection of the U.S. Scrap Barrel Site. Access to the site had to be procured through the USEPA legal staff. Five soil samples collected from the former drum storage area revealed elevated levels of xylene, ethyl benzene, chloroform, toluene, 1,1,1-trichloroethane, trichloroethene, tetrachloroethene, and PCBs.

1.4 REGULATORY STATUS

In 1973, J.B. Industrial filed for a disposal permit under the Environmental Protection Act and the

Resource Conservation and Recovery Act (RCRA). However, this permit was denied. Information currently available gives no indication that the site is under the authority of the Atomic Energy Act (AEA), the Uranium Mill Tailings Radiation Control Act (UMTRCA), or the Federal Insecticide, Fungicide or Rodenticide Act (FIFRA).

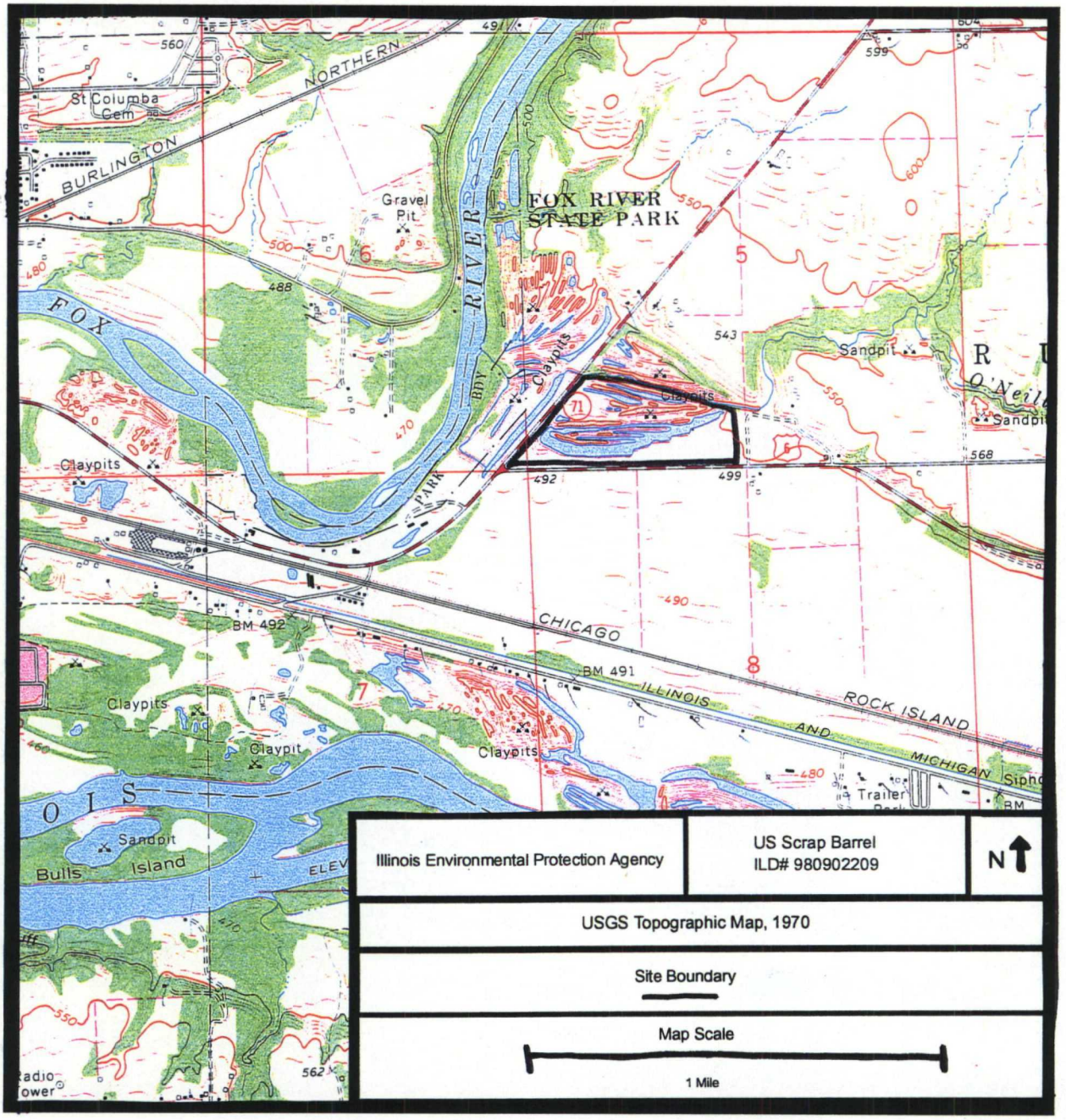


Figure 1-1

U.S. Scrap Barrel Site
Topographic Map

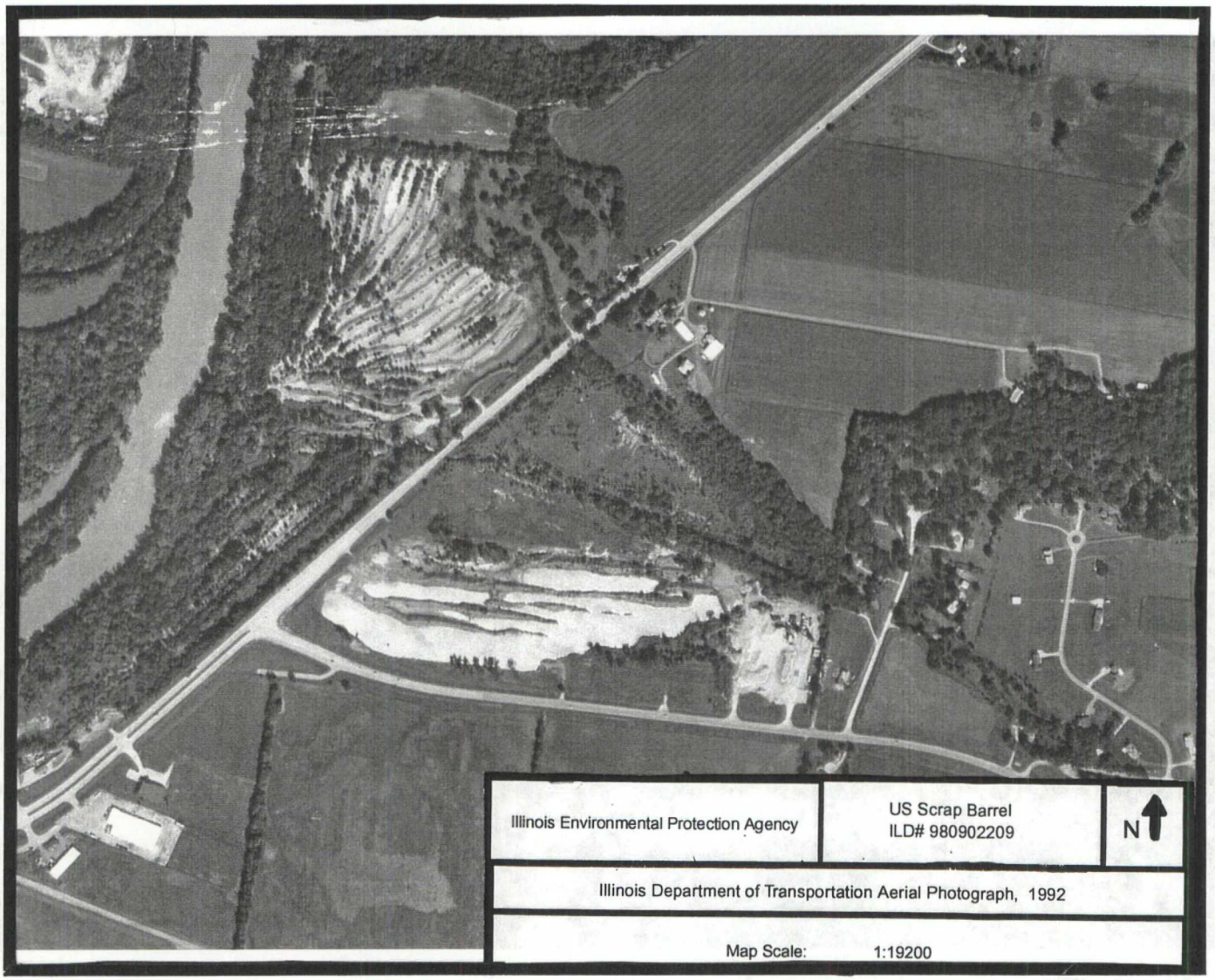


Figure 1-2
U.S. Scrap Barrel Site
Site and Surrounding Area Map

2.0 SITE INSPECTION PRIORITIZATION ACTIVITIES

2.1 SITE RECONNAISSANCE

On March 2, 1995 Sheri Adams and Ted Prescott of the IEPA's CERCLA Site Assessment Program visited the site. This visit consisted of a visual inspection to determine the status of the facility, to identify sampling points, and to identify any health or safety concerns associated with the site.

The property as well as the surrounding area were surveyed. Mr. Thomas Hill, the property owner and his associate, Mr. Wayne Hess, were present during the on-site inspection. The one-acre area in which the drums were stored and the bank of the pond were examined. The area had little vegetation and black coal present. There was material observed along the bank that appeared to be "drummed material." However, it was unable to be determined by observation if drums are present in the pond. The runoff routes were examined. Mr. Hill and Mr. Hess both stated that the ponds are used for fishing and swimming. Mr. Hill stated that he obtained a permit from the city to place a culvert from his pond to drain into the roadside ditch along Route 71 because runoff from the road was draining into his pond.

2.2 SITE REPRESENTATIVE INTERVIEW

In April of 1995 a letter was sent by the IEPA to Mr. Hill, the owner of the Brown Oil company and the U.S. Scrap Barrel Site as notification of the planned CERCLA site inspection. During a series of telephone conversations and the March 1995 reconnaissance visit Mr. Hill was informed of the sampling date as well as the approximate number of samples to be collected.

2.3 SOIL/SEDIMENT SAMPLING

Three soil samples and nine sediment samples were collected by the IEPA during the SIP. These samples were collected to establish background levels of soil constituents and to assist in determining the character and extent of possible contamination. Figure 2-1 illustrates the location of the samples taken and Table 2-1 provides more detailed information on sample appearance and location. The soil and sediment samples were collected with stainless steel trowels and hand augers. An HNU reading was taken for each sample.

2.4 GROUNDWATER SAMPLING

Groundwater samples were collected from three private residential wells. Groundwater samples were collected to determine if contamination of the aquifer has occurred. Refer to Figure 2-1 for sample locations and Section 4.0 for geologic information.

Three groundwater samples were collected during the SIP. First, sample G203 was collected from a private residential well northeast of the site. The residential well is located in the Blackwell Valley Subdivision which is located east and northeast of the site. The well is 400 feet deep. Well depth and elevations situate the bottom of the well at 50 feet below the bottom of the pond. According to well logs in the area, this well is finished and draws water from sandstone. Second, sample G204 was collected from a private residential well also located in the Blackwell Valley Subdivision. The well is located east of the site and east of the asphalt company. According to the well log this well is 100 feet deep and finished in sandstone. Third, sample G202 was collected from a private residential well located north of the site. This well is 190 feet deep. Well depth and elevations

indicate that the bottom of the well is approximately at the same depth as the bottom of the pond. According to well logs from the area, the well is finished in sandstone. Refer to Appendix B to review well logs for wells in the area.

These samples were collected from outside faucets which bypassed any treatment or filtering system. The faucets were turned on and no HNU reading above background was detected. Three temperature, pH, and conductivity readings were taken before the sample was collected. The wells were purged for approximately 15 minutes before sampling. Sample G202 had a strong sulfur odor.

All of the sample jars were packaged and sealed in accordance with Agency Site Assessment Program procedures. All samples were analyzed for the Target Compound List parameters. The soil samples were sent to COMPU CHEM Laboratories in RTP, North Carolina. The groundwater samples were sent to Central Region Laboratories in Chicago, IL. A quality assurance/quality control review of all of the analytical data was conducted by Lockheed, an Environmental Science Assistance Team contractor for USEPA Region V. A final quality assurance review of the data packages was subsequently performed by Central Region Laboratories of USEPA Region V. A copy of the Target Compound List is provided in Appendix C.

2.5 KEY SAMPLES

"Key samples" are analytical data obtained during the SIP that indicate observed contamination and/or meet the Hazard Ranking System (HRS) definition of an observed release. These determinations are based upon USEPA guidance. Table 2-1 identifies these samples taken during

the SIP that meet the above stated criteria. Groundwater samples detected no contaminants present above detection limits or benchmarks. Sediment samples collected from the pond revealed elevated levels of PCBs, lead, zinc, isophrone, and bis(2-Ethylhexyl)phthalate. SIP soil samples indicate elevated levels of 1,2-dichloroethene, chloroform, 1,1,1-trichloroethane, trichloroethene, 1,1,2-trichloroethane, benzene, tetrachloroethene, xylene, isophrone, lead, ans arsenic in addition to the conmpounds detected in 1986 during the SI.

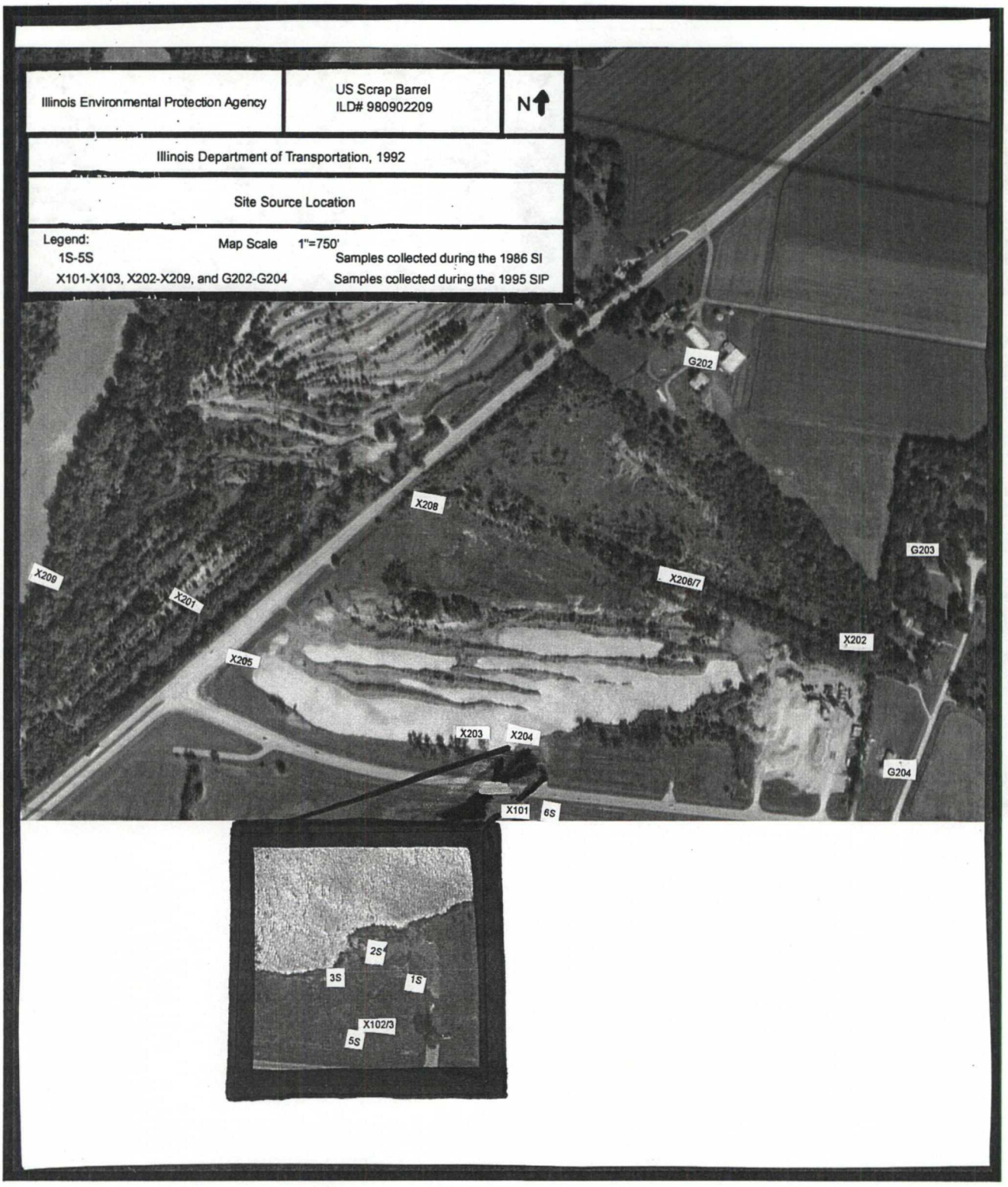


Figure 2-1
U.S. Scrap Barrel Site
Sample Locations

TABLE 2–1 SOIL/SEDIMENT SAMPLE DESCRIPTIONS

SAMPLE	DEPTH	APPEARANCE	LOCATION	JUSTIFICATION
Soil Samples				
X101	1'	Black clay and loam, silty	34 E and 10' N of JULIE marker G3SC and 42'4" S of Rt. 6	Background soil sample
X102/X103	1.5–2'	Black clay with cinders, silty	162' N of Rt. 6 and 30' W of driveway	Collected from the drum storage area to assist in determining the extent of contamination HNU reading at 6–10 units
Sediment Samples				
X201	0–6" under 6" of water	Black, silty with clay and organic material	48' S and 58' W of SW corner of brick building and 900' upstream of sample X209	Collected from O'Neil Creek to determine if wetlands along the creek have been impacted
X202	0–6" under 4" of water	Dark brown silt with some sand	57' W and 24' N of SW corner of brown shed (S of residential area and upstream of the asphalt plant) from O'Neil Creek	Background sediment sample
X203	0–6" under 9' of water	Tight, black to dark gray silty clay with organic material	Collected from the pond – 20' N of pond bank	Collected from the pond to assist in determining if sediments have been impacted
X204	6"–1' under 6" of water	Dark brown sandy silt with gravel and organic material	58' 3" W of driveway and 178' N of Rt. 6 Collected from pond bank	
X205	0–6" under 5" of water	Dark brown silt with some gravel	32' E of Rt. 71 and 22' S of road sign	Collected from the ditch along Rt. 71 in which a culvert from the pond empties in order to determine if contaminants are migrating
X206/X207	0–6" under 2–3" of water	Dark brown to black clay with organic material and sand	122' E (upstream) of Rt. 71 overpass from O'Neil Creek N of the site	Collected from O'Neil Creek to assist in determining if contaminants are migrating
X208	0–6" under 2" of water	Brown, sandy with gravel	37' E of Rt. 71 from O'Neil Creek	Collected at point where the roadside ditch enters O'Neil Creel to assist in determining if contaminants are migrating
X209	0–6" under 2' of water	Dark brown, silty sandy with organic material	39'3" E of Fox River on E side of O'Neil Creek	Collected at the confluence to determine if Fox River or wetlands along O'Neil Creek have been impacted

TABLE 2–2 KEY SAMPLE SUMMARY (1995)

COMPOUNDS	SAMPLE POINTS														
	X101 soil bkgrnd	X102	X103	X202 sed bkgrnd	X201	X203	X204	X205	X206	X207	X208	X209	G202	G203	G204
VOLATILES (ppb)															
1,2-Dichloroethene	14 U	---	24	14 U	---	---	---	---	---	---	---	---	---	---	
Chloroform	14 U	1800 DE	3800 D	14 U	---	---	---	---	---	---	---	---	---	---	
1,1,1-Trichloroethane	14 U	---	91	14 U	---	---	---	---	---	---	---	---	---	---	
Trichloroethene	14 U	1800 DE	6200 D	14 U	---	---	---	---	---	---	---	---	---	---	
1,1,2-Trichloroethane	14 U	8	---	14 U	---	---	---	---	---	---	---	---	---	---	
Benzene	14 U	83	170	14 U	---	---	---	---	---	---	---	---	---	---	
Tetrachloroethene	14 U	31	110	14 U	---	---	---	---	---	---	---	---	---	---	
Xylene	14 U	21	14	14 U	---	---	---	---	---	---	---	---	---	---	
SEMIVOLATILES (ppb)															
1,4-Dichlorobenzene	460 U	---	---	480 U	---	---	---	---	---	---	---	---	---	---	
1,2-Dichlorobenzene	460 U	---	---	480 U	---	1400	---	---	---	---	---	---	---	---	
Nitrobenzene	460 U	---	---	480 U	---	540	---	---	---	---	---	---	---	---	
Isophrone	460 U	880	570	480 U	---	13000 D	1500	---	---	---	---	---	---	---	
Naphthalene	460 U	---	---	480 U	---	2900	---	---	---	---	---	---	---	---	
2-Methylnaphthalene	460 U	---	---	480 U	---	4700 D	---	---	---	---	---	---	---	---	
Dimethylphthalate	460 U	---	---	480 U	---	1600	---	---	---	---	---	---	---	---	
Phenanthrene	460 U	---	---	480 U	---	580	---	---	---	---	---	---	---	---	
Di-n-butylphthalate	460 U	---	---	480 U	---	1600	540	---	---	---	---	---	---	---	
Butylbenzylphthalate	460 U	---	---	480 U	---	2200	560	---	---	---	---	---	---	---	
bis(2-Ethylhexyl)phthalate	460 U	---	---	480 U	---	13000 D	2500	---	---	---	---	---	---	---	
PESTICIDES (ppb)															
Aldrin	2.3 U	---	2.5 P	2.4 U	---	---	---	---	---	---	---	---	---	---	
Aroclor-1242	46 U	---	---	47 U	---	940 P	670 C	---	---	---	---	---	---	---	
Aroclor-1254	46 U	---	---	47 U	---	450	---	---	---	---	---	---	---	---	
Aroclor-1260	46 U	---	---	47 U	---	---	130	---	---	---	---	---	---	---	
INORGANICS (ppm)															
Arsenic	2.5 B	---	13.8	5.6	---	---	---	---	---	---	---	---	---	---	---
Lead	21.4 *	---	---	7.6 *	---	89.8 *	48.7 *	58.2 *	---	---	---	---	---	---	---
Zinc	81 E	---	376 E	35.3 E	---	401 E	106 E	183 E	---	---	---	---	---	---	---

Source: This table is a summary of the sample analysis taken from the raw data sheets and validation sheets.

U Indicates the material was analyzed, but was not detected above the level of the associated value. The associated value reported for the background samples is the detection limit.
E For organic results indicates compounds whose concentrations exceed the calibration range of the instrument.
E For inorganic results indicates the reported value is estimated because of the presence of interferences.
* Indicates the duplicate analysis is not within control limits.
D Indicates an identifiued compound in an analysis has been diluted.
C Indicates pesticide results that have been confirmed by GC/MS.
P Indicates a pesticied/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.

TABLE 2–3 KEY SAMPLE SUMMARY (1986)

COMPOUNDS	SAMPLE POINTS					
	6S soil bkgrnd	1S	2S	3S	4S	5S
VOLATILES (ppb)						
Ethylbenzene	5 U	15	– – –	– – –	– – –	– – –
Chloroform	5 U	– – –	460	– – –	– – –	8
1,1,1–Trichloroethane	5 U	– – –	– – –	– – –	– – –	15
Trichloroethene	5 U	– – –	– – –	– – –	– – –	160
Tetrachloroethene	5 U	– – –	– – –	– – –	7	440
Benzene	5 U	– – –	– – –	– – –	– – –	– – –
Xylene	5 U	31	6	– – –	– – –	– – –
Toluene	5 U	– – –	– – –	– – –	12	– – –
SEMIVOLATILES (ppb)						
Isophorone	17000 U	160000	– – –	– – –	– – –	67000
2–Methylnaphthalene	17000 U	69000	29000	26000	290000	130000
Phenanthrene	17000 U	– – –	– – –	– – –	21000	– – –
PESTICIDES (ppb)						
Aroclor–1242	92 U	– – –	– – –	– – –	– – –	4600
Aroclor–1260	180 U	– – –	– – –	– – –	– – –	2100
INORGANICS (ppm)						
Arsenic	6	– – –	– – –	– – –	20	– – –
Chromium	7.9 E	44 E	– – –	21 E	– – –	72 E
Zinc	127 *	625 *	– – –	– – –	– – –	399

Source: This table is a summary of the sample analysis taken from the raw data and validation sheets.

U Indicates the material was analyzed, but was not detected above the level of the associated value. The associated value reported for the background sample is the detection limit.

E Indicates the reported value is estimated because of the presence of interferences.

* Indicates the duplicate analysis is not within control limits.

3.0 SITE SOURCES

3.1 SOURCE DESCRIPTION

Information obtained during CERCLA activities identify 1 source at the U.S. Scrap Barrel Site - contaminated soil. Moreover, the drums that were stored at the site could not be considered a source as defined by HRS, because the drum removal is a "qualifying removal." Due to the limited scope of these screening activities, the possibility exists that further investigation could reveal additional information that could further characterize this source, or perhaps lead to the identification of additional sources.

Based on analytical results of soil samples collected during the SI in 1986 and the SIP in 1995 one acre of land is considered to be contaminated soil. Surface and subsurface soil samples indicate that the area is one acre in horizontal size and as deep as 2 feet. This is the area in which the drums were stored - south of the pond and north of Route 6 (refer to Figure 3-1). The delineation of this area is based on the location of samples 1S-5S collected during the SI and X102 and X103 collected during the SIP which are characterized as points of observed contamination. The soil contamination determination was based on USEPA guidance for determining what constitutes observed contamination. These contaminants were reported above detection limits or were detected at three times the background concentration. Therefore, the sample locations are defined as points of observed contamination.

Soil samples revealed elevated levels of 1,2-dichloroethene, 1,1,2-trichloroethane, benzene, isophrone, ethylbenzene, xylene, chloroform, toluene, 1,1,1-trichloroethane, trichloroethene,

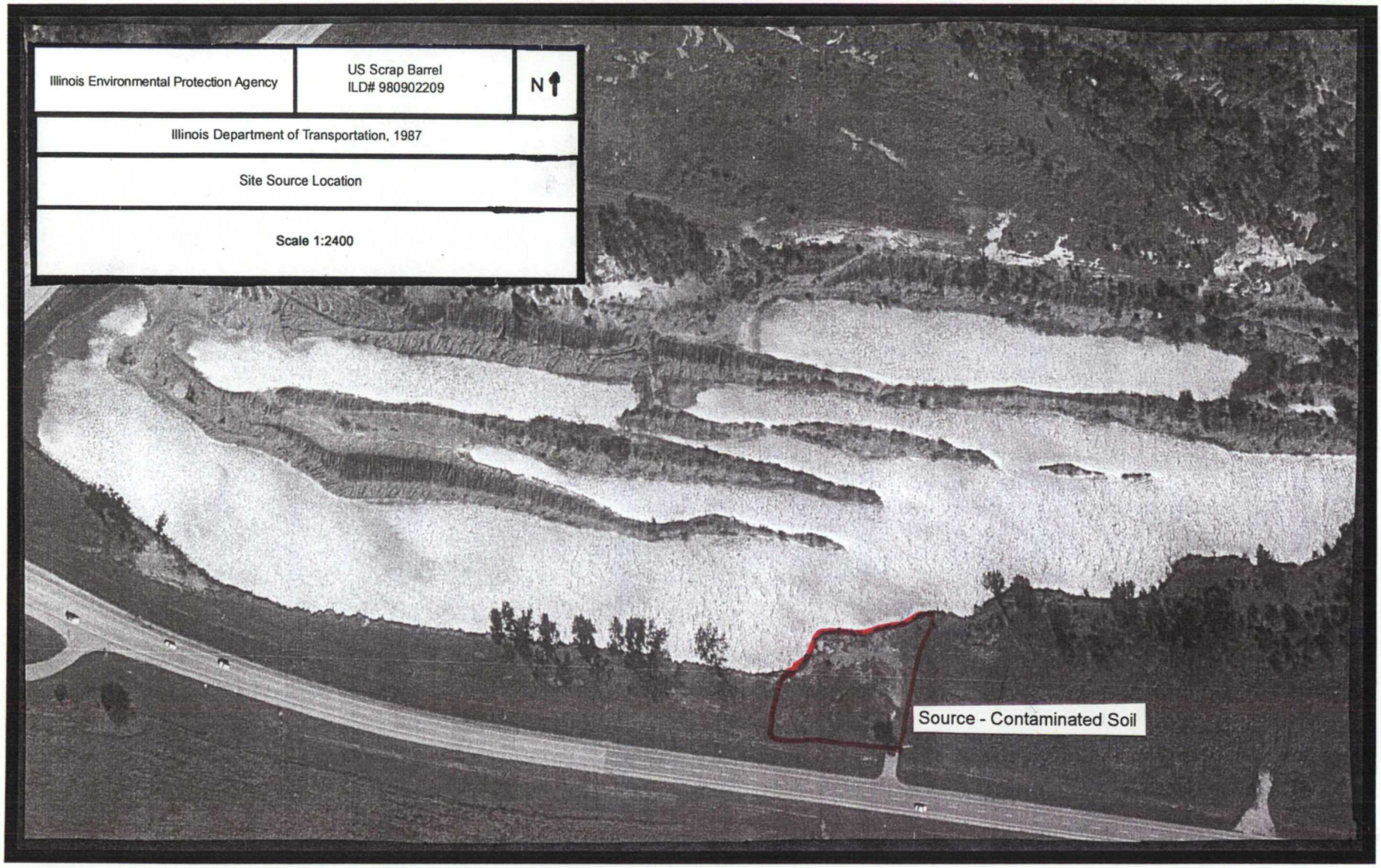


Figure 3-1
U.S. Scrap Barrel Site
Site Source Location

4.0 MIGRATION PATHWAYS

4.1 GROUNDWATER

According to a report by the Illinois State Geological Survey and area well logs, glacial tills are underlain by sandstone. The Pennsylvanian System directly underlies surface deposits and glacial tills. This system is only 5-10 feet thick in this area and consists of relatively impermeable clays and shales with coal seams. Although, this clay layer is as thick as 40 feet in some areas. This clay layer may prohibit the downward movement of chemicals. Below the Pennsylvanian System is bedrock. The top of the bedrock is 50 feet from the surface and consists of the St. Peter and the Ironton-Galesville sandstones. These bedrock materials consist primarily of sandstone but, do contain shale and dolomite.

The above geologic information suggests the presence of two major aquifers - the St. Peter and the Ironton-Galesville sandstones. These aquifers are thick, well-sorted, and very dependable aquifers for municipal water. Evidence suggests that these two aquifers are hydraulically connected. These two aquifers are utilized as private and municipal water sources. According to well logs, private wells range in depth from 30-400 feet and draw water the St. Peter sandstone formation. The three residential drinking water wells sampled during the SIP are finished in and draw water from the St. Peter aquifer at depths of 400; 100, and 190 feet. The nearest private well is located 800 feet north of the site (sample G202). The city of Ottawa municipal wells are located approximately two miles west of the site. These wells are finished in the Ironton-Galesville at 1180-1220 feet deep. In addition to these two aquifers, the Pennsylvanian System may be used locally as a source of water. However, water drawn from this system is high in sulfur and not generally used as drinking water.

The total population served by groundwater within a 4-mile radius of the site is as follows:

DISTANCE (miles)	POPULATION SERVED
0-1/4	52
1/4-1/2	103
1/2-1	148
1-2	18166
2-3	518
3-4	971

Three groundwater samples were collected during the SIP. These samples revealed no contaminants above health-based benchmarks or at levels to qualify as an observed release. It should be noted that due to an error in the laboratory paperwork process sample G204 was only analyzed for inorganic compounds.

4.2 SURFACE WATER

There are two routes by which surface water runoff, drainage, or potential contaminants may reach O'Neil Creek and enter the surface water pathway (refer to Appendix A). First, a culvert leaves the west end of the pond and carries overflow into a ditch that runs along Route 71. This ditch also collects surface runoff from the site. The ditch enters O'Neil Creek at 700 feet downstream - the probable point of entry (PPE). O'Neil Creek empties into the Fox River at 1800 feet downstream. The overflow culvert from the pond could carry contaminants that have been deposited into the pond and sediments, runoff from the one acre area into the ditch and into surface waters. Second, there have been reports of pumping the pond water into O'Neil Creek south of the site. According to the U.S. Fish and Wildlife Service National Wetland Inventory Map, there are wetlands located

along the Fox River. The Fox River is also a fishery. There is an area that may be a wetland located adjacent to O'Neil Creek in the former clay pit area, west of the site.

The pond on-site is also considered a surface water body as defined by HRS. The pond is also a PPE. This pond is used for fishing and swimming. Therefore, this on-site surface water body is a fishery.

Analytical data (X203 and X204) collected during the SIP indicates that the pond sediments are contaminated. PCB, lead and zinc exceed the Lowest Effect Levels (but do not exceed the Severe Effect Levels) of the Ontario Sediment Standards and the food chain and environmental benchmarks in the Superfund Chemical Data Matrix (SCDM). Isophrone and bis(2-Ethylhexyl)phthalate exceed the food chain benchmarks. Due to the persistence, ecotoxicity, and bioaccumulation of some of these compounds, a threat to human health and the environment may exist.

Contaminants present in the pond do not seem to be migrating to the road side ditch, O'Neil Creek, or the Fox River as evidenced by samples X205-X209. This is most likely due to the attenuation of the contaminants to clay particles and to the decrease flow of this body of water. Therefore, this data indicates that wetlands along these surface water bodies and the Fox River fishery have not been impacted by the site.

4.3 SOIL EXPOSURE

Chemical analyses of on-site soil samples collected during the SI in 1986 and the SIP in 1995

indicate a potential for direct contact with contaminants at this site. Samples indicate the presence of contaminants at elevated levels at or near the surface and to a depth of 2 feet. The contaminants detected in on-site soils include: 1,2-dichloroethene, 1,1,2-trichloroethane, benzene, isophrone, ethylbenzene, xylene, chloroform, toluene, 1,1,1-trichloroethane, trichloroethene, tetrachloroethene, PCBs, arsenic, and zinc. The PCB level in sample 5s and the trichloroethene levels in samples X102 and X103 exceeded the SCDM soil exposure benchmark.

The possibility for exposure does exist. Access to the site can be and has been easily gained as evidenced by fishing and swimming. Contaminants were detected at or near the surface. The site is not surrounded by a fence and is very accessible. Approximately 383 people live within a 1-mile radius of the site. This estimate is based on USGS topographic maps of the area and the 2.59 persons per household for LaSalle County as determined by the U.S. Bureau of Census. The population within a 4-mile radius of the site is as follows:

DISTANCE (miles)	POPULATION
0-1/4	51
1/4-1/2	103
1/2-1	148
1-2	3925
2-3	10,037
3-4	3,694

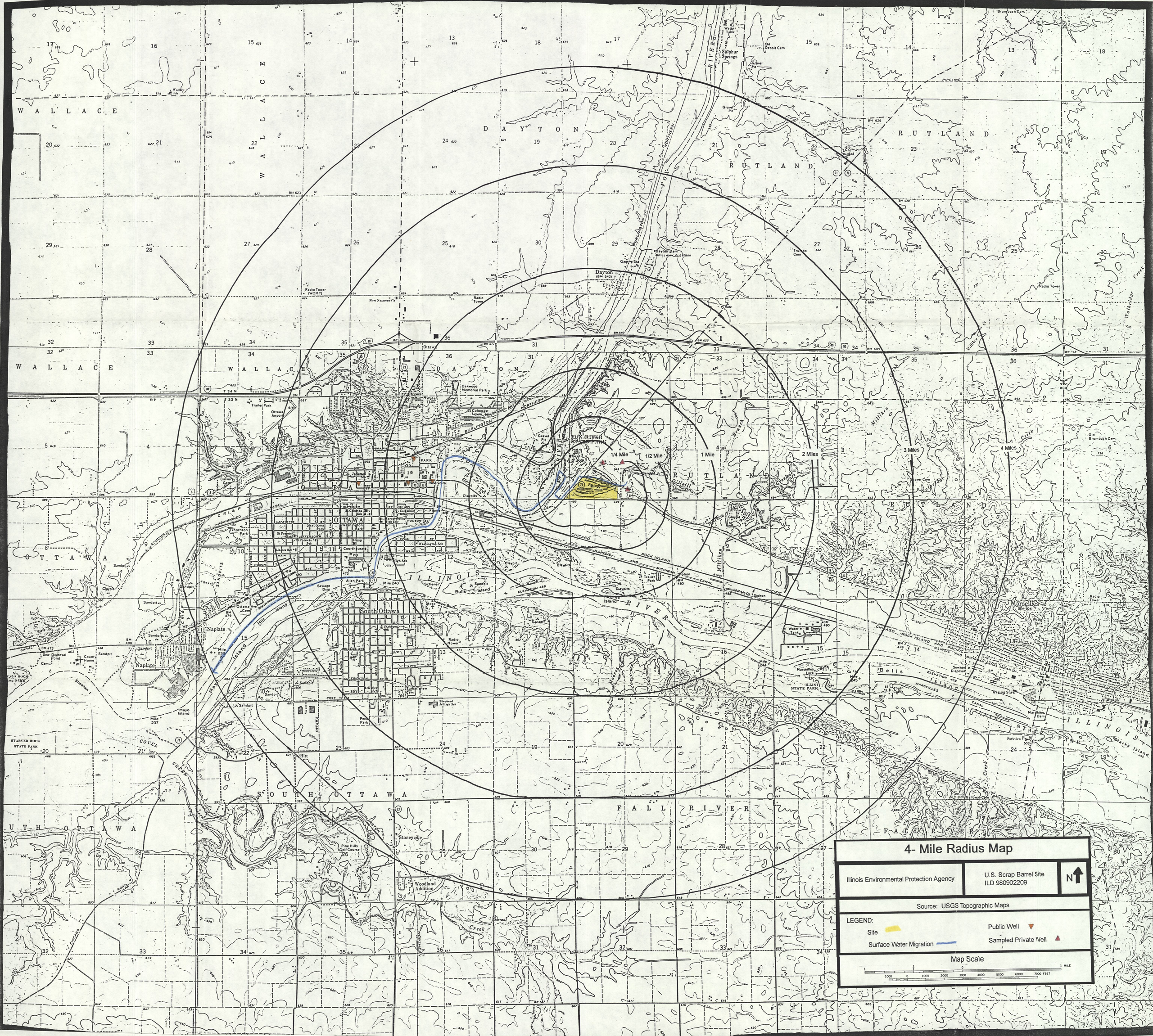
4.4 AIR

A release of hazardous substances to the air has not been documented to have occurred. However, nearby residents have reported fires on-site and odors during the time the drums were present.

Since the drums have been removed no reports of fires or odors have been noted. The source of potential air contamination has been removed. Therefore, this pathway has not been evaluated.

APPENDIX A

4-Mile Radius Map



4- Mile Radius Map

Illinois Environmental Protection Agency	U.S. Scrap Barrel Site ILD 980902209	N

Source: USGS Topographic Maps

LEGEND:

- Site
- Surface Water Migration
- Public Well
- Sampled Private Well

Map Scale

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

APPENDIX B

Target Compound List

TARGET COMPOUND LIST

Volatile Target Compounds

Chloromethane	1,2-Dichloropropane
Bromomethane	cis-1,3-Dichloropropene
Vinyl Chlorde	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropene
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroehtene (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	1,1,2,2-Tetrachloroethane
2-Butanone	Toluene
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethylbenzene
Vinyl Acetate	Styrene
Bromodichloromethane	Xylenes (total)

Base/Neutral Target Compounds

Hexachloroethane	2,4-Dinitrotoluene
bis(2-Chloroethyl) Ether	Diethylphthalate
Benzyl Alcohol	N-Nitrosodiphenylamine
bis (2-Chloroisopropyl) Ether	Hexachlorobenzene
N-Nitroso-Di-n-Propylamine	Phenanthrene
Nitrobenzene	4-Bromophenyl-phenylether

Hexachlorobutadiene	Anthracene
2-Methylnaphthalene	Di-n-Butylphthalate
1,2,4-Trichlorobenzene	Fluoranthene
Isophorone	Pyrene
Naphthalene	Butylbenzylphthalate
4-Chloroaniline	bis(2-Ethylhexyl)Phthalate
bis(2-chloroethoxy)Methane	Chrysene
Hexachlorocyclopentadiene	Benzo(a)Anthracene
2-Chloronaphthalene	3-3'-Dichlorobenzidene
2-Nitroaniline	Di-n-Octyl Phthalate
Acenaphthylene	Benzo(b)Fluoranthene
3-Nitroaniline	Benzo(k)Fluoranthene
Acenaphthene	Benzo(a)Pyrene
Dibenzofuran	Ideno(1,2,3-cd)Pyrene
Dimethyl Phthalate	Dibenz(a,h)Anthracene
2,6-Dinitrotoluene	Benzo(g,h,i)Perylene
Fluorene	1,2-Dichlorobenzene
4-Nitroaniline	1,3-Dichlorobenzene
4-Chlorophenyl-phenylether	1,4-Dichlorobenzene

Acid Target Compounds

Benzoic Acid	2,4,6-Trichlorophenol
Phenol	2,4,5-Trichlorophenol
2-Chlorophenol	4-Chloro-3-methylphenol
2-Nitrophenol	2,4-Dinitrophenol
2-Methylphenol	2-Methyl-4,6-dinitrophenol
2,4-Dimethylphenol	Pentachlorophenol
4-Methylphenol	4-Nitrophenol
2,4-Dichlorophenol	

Pesticide/PCB Target Compounds

alpha-BHC	Endrin Ketone
beta-BHC	Endosulfan Sulfate
delta-BHC	Methoxychlor
gamma-BHC (Lindane)	alpha-Chlordane
Heptachlor	gamma-Chlordane
Aldrin	Toxaphene
Heptachlor epoxide	Aroclor-1016
Endosulfan I	Aroclor-1221
4,4'-DDE	Aroclor-1232
Dieldrin	Aroclor-1242
Endrin	Aroclor-1248
4,4'-DDD	Aroclor-1254
Endosulfan II	Aroclor-1260
4,4'-DDT	

Inorganic Target Compounds

Aluminum	Manganese
Antimony	Mercury
Arsenic	Nickel
Barium	Potassium
Beryllium	Selenium
Cadmium	Silver
Calcium	Sodium
Chromium	Thallium
Cobolt	Vanadium
Copper	Zinc

Iron	Cyanide
Lead	Sulfide
Magnesium	

APPENDIX C

Well Logs

← Borings →

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 200029

Town Ottawa Township Fall River Map No. 19
Company McElvain Coal Co. No. 5 R 4E
Farm No T. 33 N Sec 8 SE SE
Authority Clayton G. Ball
Elevation 491.3
Collector Cady
Confidential Date Drilled 1936

Diamond Drill No 5 600' E of NW cor. SE SE

County No. 4

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil	1		1	
	Clay	2		3	
	Shale, blue	29		32	
	Shale, gray	8	3	40	3
	Coal	2		42	3
	Fire clay	1	3	43	6

County LaSalle Index No. 1908
Drill Record 8-33N-4E
(31792—10M—3-30) Illinois Geological Survey, Urbana

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 200029

Town Ottawa Township Fall River Map No. 19
Company McElvain Coal Co No. 12 R 4E
Farm No T. 33 N Sec 7
Authority Clayton G. Ball
Elevation 497.4 Co.
Collector Cady
Confidential Date Drilled 1936

200' S, 10' W of NE Corner SE NE

Diamond Drill No. 12

County No. 3

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Soil	1		1	
	Gravel and boulders	2		3	
	Clay, yellow	4		7	
	Shale, blue	17		24	
	Shale, gray	5	4	29	4
	Coal	2		31	4
	Fire clay		8	32	

County LaSalle Index No. 1907
Drill Record 7-33N-4E
(31792—10M—3-30) Illinois Geological Survey, Urbana

ST Peter

Town Ottawa Township Rutland R. 4E
Company Chas. E. Woodruff No. T. Sec.
Farm Chicago Retort & Fire Brick Co. 5
Authority State Water Survey 33
Elevation 540 top. map N
Collector
Confidential Date Drilled Sept. 1941
2000' S. line, 1500' W. line SW

No.	COUNTY No. 129 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Drift	50		50	
	Hardpan	5		55	
	Shale	8		63	
	Coal	2		65	
	Fire clay	12		77	
	St. Peter sandstone	141		218	

Capacity 10 g.p.m.
Water lowered to 77'

4½" casing to 51'
5" casing from 0-99'4"
Injector pump set 74' from top of 5" pipe

Permit issued August 22, 1941.

NO ENVELOPE COUNTY NO. 129

COUNTY LaSalle 5-33N-4E

(60430—5M) ILLINOIS GEOLOGICAL SURVEY, URBANA (3-43)

ST Peter

(38644—5M—8-55)

Page 1 ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
Clay and Lime Shells	45	0	45
Clay and Lime Shells	40	45	85
Lime Shell	3	85	88
Sandstone	52	88	140

Finished in Sandstone at 88-140'.
Cased with 5" black from 0-87'
Size hole below casing 5".
Static level from surface 38'.
Tested capacity 10 gallons per minute.
Water lowered to 48'.
Length of Test 4 hours.

Original Returned.
No envelope.

COMPANY Charles E. Woodruff Co.
FARM Burke, Phil NO.
DATE DRILLED 1948 COUNTY NO. 1090
AUTHORITY Charles E. Woodruff Co.
ELEVATION 542' ETH
LOCATION Approximately SE SW SE(Home)
COUNTY LA SALLE
5-33N-4E

(2)

APR 24 '95 10:22 No.002 P.01

ID:815-433-9522

LaSalle Co. Health Dpt

Post-it® Fax Note 7671	Date 4/24/95	# of pages ▶ 1
To Sherry Adams	From Sara	
Co./Dept. IEPA	Co. LCHD	
Phone #	Phone #	
Fax # 217 782-3258	Fax # 815 433-9522	

APR 24 1995

FAXED

...nk Copies:
... of Public Health
...y: Well Contractor
...y: Well Owner

Well Construction Report

THIS FORM MUST BE COMPLETED WITHIN 30 DAYS OF WELL COMPLETION AND SENT TO
THE ILLINOIS DEPARTMENT OF PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
525 WEST JEFFERSON STREET
SPRINGFIELD, ILLINOIS 62761

GEOLOGICAL AND WATER SURVEYS WELL RECORD

...Well
...d____ Hole Diam. 5 in. Depth 100 ft
...ed Slab: Yes___ No___
...en X Drive Pipe Diam.____ in. Depth____ ft
...led X Finished in Drift X In Rock____

...t:

(KIND)	FROM (Ft.)	TO (Ft.)
	Cuttings	

2. Well furnishes water for human consumption? Yes X No___
3. Date well drilled 8-25-92
4. Permanent pump installed? Yes X Date 9/3/92 No___
   Manufacturer Red Jacket Type____
   Location Well
   Capacity ____ gpm. Depth of setting 60 ft.
5. Well top sealed? Yes X No___ Type CAP
6. Pitless adapter installed? Yes X No___
   Manufacturer Williams Model No. B50AC
   How attached to casing? Drawnut
7. Well disinfected? Yes X No___
8. Pump and equipment disinfected Yes X No___

Owner instructed well was chlorinated

9. Driller Phil Kaluzik License No. 102-00051
10. Well Site Address 1946 E U.S. 6 - Marseilles
11. Property Owner Robert McLennan Well No.____
12. Permit No. W92-109 Date Issued 8-20-92
13. Location: 1946 E U.S. 6 - Marseilles, Blackwell Valley Sub. County LaSalle Sec NE Twp. 33N Rge. 4E

Show location in section plat

14. Water from Sandstone at depth 20 ft to 100 ft

15. Casing and Liner Pipe

Diam.(in)	Kind and Weight	From (ft)	To (ft)
5"	Plastic	0	63

16. Screen: Diam.____in, Length____in, Slot Size____
17. Size hole below casing 5 in. 18. Ground Elev.____ ft msl.
19. Static level 20 ft below casing top which is 1 ft. above ground level. Pumping level 60 ft, pumping gpm for ____ hours.

20. Earth Materials Passed Through	Depth of Top	Depth of Bottom
Top Soil	0	2
Clay	2	20
Shale	20	60
Sandstone	60	100

Continue on separate sheet if necessary.

Signed Phil Kaluzik

a1.1

IMPORTANT NOTICE

This State Agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act 85-0863. Disclosiure of this information is mandatory. This form has been approved by the Forms Management Center.

PRESS FIRMLY WITH BLACK PEN OR TYPE
Do Not Use Felt Pen

IL482-0126

ST Peter

LOG OF WATER WELL

Property owner John Pulkol Well No. 1

Drilled by Charles R Johnson Year 1968

Formations passed through	Thickness	Depth of Bottom
Top soil	1	1
Clay	10	11
soft stone + shale	25	36
Limestone sandstone	3	39
sandstone	43	82

COUNTY No. 7020

Permit # 5217

Received 10-22-68

[Continue on back if necessary]

Finished in sandstone at 36 to 82 ft.

Cased with 6 inch from 0 to 36 ft.

and inch from to ft.

Size hole below casing 4½ inch. Static level from surf. 31 ft.

Tested capacity 15 gal. per min. Temperature °F.

Water lowered to 35 ft in. in hrs min.

Length of test 1 hrs min. Screen

Slot Diam Length Bottom set at ft.

[Show location in Section Plat]

Township name Rutland Elev.

Description of location NW ¼ of NW ¼ of the SE ¼ of Sec 7

Sec. 7 Twp. 33N Rge. 4E

Signed E. R. Johnson County LaSalle

LA SALLE

Copy for Illinois State Geological Survey Index: 7-33N-4E

ST Peter

LOG OF WATER WELL

Property owner W. E. Nyeland Well No.

Drilled by Charles E. Woodruff Co. Year 1947

Formations passed through	Thickness	Depth of Bottom
Clay	23	23
Gravel	2	25
Clay	60	85
St Peters Sand	117	202

COUNTY No. 586

[Continue on back if necessary]

Finished in St Peters Sandstone at 85 to 202 ft.

Cased with 6 inch from 0 to 85 ft.

and inch from to ft.

Size hole below casing 6 inch. Static level from surf. 109 ft.

Tested capacity 10 gal. per min. Temperature °F.

Water lowered to No D.D. ft in. in 2 hrs 30 min.

Length of test 2 hrs 30 min. Screen

Slot Diam Length Bottom set at ft.

[Show location in Section Plat]

Township name Ottawa Elev. Sec. 7

Description of location Farm Home Twp. 33-N Rge. 4 E

Signed Chas. E. Woodruff County LaSalle

Copy for Illinois State Geological Survey Index: 7-33N-4E

(3)

NSUMER HEALTH PROTECTION, 535 WEST
?761. DO N~~ DETACH GE~ OGICAL/WATER
)E PROPE .LL LOCAT

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner William Branson Well No. ____
Address RFD 1 Ottawa, Il. 61350
Driller David Tolley License No. 102-001948
11. Permit No. 110914 Date 12-22-83
12. Water from Sandstone (Formation) 13. County LaSalle
at depth 61 to 100 ft. Sec. 8,26
14. Screen: Diam. ____ in. Twp. 33N
Length: ____ ft. Slot ____ Rge. 4E
Elev. ____
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	#200 PVC	0	68

SHOW LOCATION IN SECTION PLAT
NW SE SE

16. Size Hole below casing: ____ in.
17. Static level ____ ft. below casing top which is ____ ft. above ground level. Pumping level ____ ft. when pumping at ____ gpm for ____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	2	2
Clay	10	12
Shale	49	61
Sandstone	39	100

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Patricia Tolley DATE 5-31-84

ST Peter 8 33N 4E

Boring

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, Patented 1906.

Town Ottawa Township Fall River Map No. 19
Company McElvain Coal Co. No. 10 R 4E
Farm No. T. 33 N
Authority Clayton G. Ball Sec. 8 NE SW
Elevation 496.7
Collector Cady
Confidential Date Drilled 1936

Diamond Drill No. 10

No. Co. No. 131

Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
Soil	1		1	
Clay, yellow	3		4	
Shale, gray	26		30	
Shale, soft, dark	8	10	38	10
Coal	2	2	41	
Fire clay	1		42	

County No. 131

County LaSalle
Drill Record
(51792--10M--3-30)
Index No. 1908
Illinois Geological Survey, Urbana 8-33N-4E

(6)

ST Peter

OFFICE BUILDING SPRINGFIELD,
R SURVEYS SECTION BE SURE TO

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

Completed 10-30-67

10. Dept. Mines and Minerals permit No. 3745 Year 1967
11. Property owner CHAS ROTH Well No. 1
    Address RUTLAND TWP OTTAWA ILL
    Driller CHAS E WOODRUFF CO License No. 92-409
12. Water from SAND STONE (Formation) 13. County LA SALLE
    at depth 40 to 85 ft.
    Sec. 8
14. Screen: Diam. ______ in. Twp. 33 N
    Length: ____ ft. Slot ________ Rng. 4-E
    Elev. ______
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
4"	BLK T&C 11#	0	48

SHOW LOCATION IN SECTION PLAT

500'N, 700'E, SW/c SW (Permit)

16. Size Hole below casing: 4 in.
17. Static level 25 ft. below casing top which is 1 ft. above ground level. Pumping level 30 ft. when pumping at 15 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
CLAY	10	10
SHALE	30	40
SAND ROCK	45	85
Tracing done by Dept. of Pub. Health		
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED W. L. Houston DATE 10-28-67

COUNTY No. 1953

LaSALLE 8-33N-4E

ST Peter

REQUESTED AND MAIL ORIGINAL TO STATE
REAU OF ENVIRONMENTAL HEALTH, 535 WEST
62701. DO NOT DETACH GEOLOGICAL/WATER
IDE PROPER WELL LOCATION.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 6-19-75

10. Property owner John Pufli[illegible] Well No. ______
    Address [illegible] Ottawa [illegible]
    Driller Charles E[illegible] License No. 10[illegible]
11. Permit No. 28377 Date June [illegible]
12. Water from SAND ROCK (Formation) 13. County LASALLE
    at depth ____ to ____ ft. Sec. 8
14. Screen: Diam. ______ in. Twp. 33N
    Length: ____ ft. Slot ________ Rge. 4E
    Elev. ______
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	BLK T&C 15#	+2	50

SHOW LOCATION IN SECTION PLAT

2000'NL, 1650'WL SW (permit)

16. Size Hole below casing: 4 in.
17. Static level 25 ft. below casing top which is 2 ft. above ground level. Pumping level 27 ft. when pumping at 15 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top soil	2	2
Shale & Slate	38	40
Coal	2	42
Sand Rock	38	80

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [illegible] DATE [illegible]

COUNTY No. 22586

LaSALLE 8-33N-4E

(8)